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Migration and Cooperative Infrastructures

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Abstract A proper understanding of the moral and political significance of migration requires a focus on global inequalities. More specifically, it requires a focus on those global inequalities that affect people's ability to participate in the production of economic goods and non-economic goods (e.g., relationships of intimacy and care, opportunities for self-expression, well-functioning institutions, etc.). We call *cooperative infrastructures* the complex material and immaterial technologies that allow human beings to cooperate in order to generate human goods. By enabling migrants to access high-quality cooperative infrastructures, migration contributes to the diffusion of technical and socio-political innovations. In this way, it positively affects the ability of individuals from poorer countries to participate in the production of human goods, to benefit from such production, and to contribute to human development. Migration can also damage the material and immaterial components of the cooperative infrastructures accessible in both the host and sending countries; these potential downsides of migration should not be ignored, although arguably they can often be neutralized, alleviated, or compensated.

Keywords Philosophy of technology · Migration · Productivity · Diffusion of innovations · Inequality · Human development · Globalization

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1 Migration, Global Inequalities, and Cooperative Infrastructures

A proper understanding of the moral and political significance of between-country migration requires a focus on global inequalities.¹ As they are relatively easy to measure, wage and income inequalities can be taken as a useful starting point. Income inequalities between countries are larger and, in many respects, more significant than income inequalities within countries: the country where one is born and lives determines up to two-thirds of one's lifetime income (Milanovic 2016, p. 5). Milanovic refers to the advantage that citizens of high-income countries possess simply as a result of living in such countries—irrespective of their talents, genes, social standing, connections, etc.—as *citizenship rent*. He calls it a *rent* because it is “independent of a person's individual effort and their episodic (that is, not birth-related) luck” (Milanovic 2016, p. 132). The disadvantage of citizens of low-income countries is reduced when such individuals move to countries where income per capita is higher. Clemens et al. (2009) provide some useful estimates: by moving to the USA, a Pakistani worker can, on average, achieve a 6-fold increase in their wages; similarly, a Yemeni worker moving to the USA can, on average, achieve a 15-fold increase in their wages. This exceeds what can normally be achieved by several decades of economic development. These authors talk about there being a *place premium*, which they define as the extent to which a worker in the USA earns more (in real, consumption-deflated, terms) than an “identical” worker (i.e., a worker with exactly the same employment-relevant intrinsic features) in a poorer country. Such a premium is sustained by restrictions on labor mobility (Clemens et al. 2009, p. 2). Migration does not necessarily reduce economic inequalities between countries, but it can reduce the economic inequalities between migrants and those born in richer countries.² Citizenship rents and place premiums are an important source of motivation for between-country migration.

However, just like there are global inequalities in income, there are also global inequalities in the distribution of other human goods, and these are also important. A *human good* can be defined as anything that contributes to human well-being. Not all human goods are economic goods. Things like love, friendship, and other relationships of intimacy, care, and sociality are human goods that have economic implications and are affected by economic factors, but they are not economic goods in any narrow sense. The same applies to things like health, education, knowledge, civil liberties, opportunities to explore and shape one's identity, opportunities for artistic expression, etc. People in some countries, on average, enjoy more human goods and higher-quality human goods than people in other countries. To the extent that individuals enjoy more and higher-quality human goods by virtue of their citizenship, they enjoy a *citizenship*

¹ Our focus is exclusively on between-country migration. The term *migrant* and its relation to notions such as *refugee*, *asylum seeker*, *illegal immigrant*, *economic migrant*, etc. are contested issues (Mezzadra and Neilson 2013). We do not address such debates here. For our purposes, it is sufficient to consider the philosophical implications of the movement of people from poorer countries to richer countries, and the implications of the restrictions on such movement. The distinction between poorer and richer countries can be made in a variety of ways, since global economic inequalities are multidimensional. One relatively common way to make the distinction is in terms of PPP (purchasing power parity) income per capita: poorer countries have a lower PPP income per capita than richer ones. For details about the different methods of measuring economic global inequalities, see Milanovic (2016).

² See Rodrik (2017a). For additional complications—due, for example, to the imperfect substitution between skill types—see Hendricks and Schoellman (2017).

rent encompassing both economic and non-economic goods. These inequalities are a powerful motivation for between-country migration: people in countries with limited access to important human goods often wish to move to countries where more and higher-quality human goods are accessible.

The full relevance of the unequal distribution of human goods to debates about migration becomes clearer when one focuses on the *production* of such goods. The global inequalities in the distribution of human goods are the result of differences in the access to what we call *cooperative infrastructures*, which in turn affect people's participation in the production of human goods. We define a *cooperative infrastructure* as any material or immaterial technology that contributes to people's ability to produce human goods through their interaction with others. Here is a list of important cooperative infrastructures: the transportation system, the telecommunications system, the electrical grid, the water supply system, the system responsible for the production of food, the industrial sector, the political system, the banking and financial system, the criminal and civil justice system, widespread norms of behavior and attitudes (e.g., regarding how to deal with others, who to trust, and who to distrust and in what contexts), the health system, the family structure, the *public knowledge system*, etc.³

Human beings are an *ultrasocial* or *hyper-cooperative* species (Turchin 2015; Henrich 2016; Tomasello 2014; Laland 2017). In isolation, a human being can produce few, if any, human goods.⁴ Since cooperative infrastructures are tools for the cooperative production of human goods, they are themselves human goods. Moreover, cooperative infrastructures are interdependent, at least to some extent. For example, politics affects banking, industrial production, and the media, which in turn affect politics. We call *cooperative frameworks*, or *cooperative scaffolding*, the interconnected sets of cooperative infrastructures that can be accessed by specific individuals or groups of individuals. Cooperative frameworks, just like their component infrastructures, have been evolving over time. As a result of the interaction between social and technological factors, they have become increasingly complex (Morris 2015; McAfee and Brynjolfsson 2017; Baldwin 2017). The production of human goods has become increasingly socialized (Lazzarato 1996; Hardt and Negri 2000, 2009; Scholz and Schneider 2016; Scholz 2012; Srnicek 2016), and nowadays human beings can produce human goods that were unthinkable in the past.

Cooperative infrastructures (and therefore also cooperative frameworks) are not insulated nation-based entities. In an increasingly globalized world, many individuals have access to cooperative infrastructures that exist or operate at a supranational level, such as the internet, expertise networks, global financial markets, and international supply chains. Nevertheless, there are global inequalities in the quality of the cooperative infrastructures that people in different countries can access. The country where one is born and lives determines *to a very large extent* the quality of the cooperative infrastructures one can access, which in turn determines *to a very large extent* the contribution one makes to the production of human goods. This affects a number of things, including also the ways in which one can be economically

³ For a definition of *public knowledge systems*, see Kitcher (2011). The public knowledge system includes, among other things, the school system, universities, libraries, research institutes, expertise networks, research funding bodies, and the media (both traditional media and social media).

⁴ "The one never produces. We only produce together, socially" (Hardt and Negri 2017, p. 93).

active, the economic consequences of one's activities, and one's income.⁵ In different countries, "identical" workers have access to radically different cooperative frameworks. Some countries can reward an individual's labor with higher wages because they have more sophisticated industrial technology, transportation networks, telecommunication systems, welfare systems, formal and informal institutions, and a host of other technological and socio-cultural factors that make many things easier to do, many economic outcomes easier to achieve, many activities more economically valuable, etc. It is in this sense that between-country inequalities in the access to cooperative infrastructures can explain between-country inequalities in wages and incomes (World Bank 2002, 2017; Allen 2011; Acemoglu and Robinson 2012; Neal and Williamson 2014; Canning 1999).

On this view, people in some countries can enjoy more and higher-quality human goods—including non-economic goods—primarily because higher-quality cooperative infrastructures are available to them, which in turn allows them to *produce* more and higher-quality human goods. The notion of productivity is crucial here.⁶ However, since not all human goods are economic goods, not all productivity is economic productivity. A broader notion of productivity is required: *productivity*, broadly conceived, can be defined as the extent to which people are efficient at producing human goods (Buchanan 2011, p. 44). Efficiency in the production of commodities is a special case of a more general, and more philosophically pregnant, notion. It is the broader notion of productivity that is relevant here. Higher-quality cooperative frameworks make it easier for people to engage in the production (and reproduction)⁷ of meaningful relationships, good institutions, opportunities for entertainment and relaxation, opportunities for expressing one's creativity and for constructing one's identity, etc.

There are long-standing debates about the causes of global inequalities.⁸ These can be conceived as debates about inequalities in the access to cooperative infrastructures.⁹ However, irrespective of what those causes are, the existence of citizenship rents and place premiums indicates that migrating from a lower-income country to a higher-income country is often *by itself* sufficient to enable people to access more efficient cooperative

⁵ The type and quality of the cooperative infrastructures one can access is also influenced by other factors, such as IQ, personal connections, etc. However, these factors play (in relative terms) a smaller role (Clemens 2010).

⁶ "Productivity is not everything, but in the long run it is almost everything. A country's ability to improve its standard of living over time depends almost entirely on its ability to raise its output per worker" (Krugman 1997, p. 11).

⁷ The *production of human goods* should be understood to include activities that keep human goods in existence and activities that recreate ("socially reproduce") human goods.

⁸ See for example: Diamond (1997); Landes (1998); Sachs (2015); Cochran and Harpending (2009); Milanovic (2011); Galor (2011); Acemoglu and Robinson (2012); Spolaore and Wacziarg (2013); Morris (2013); Wade (2014); Jones (2015); Clark (2007); Ferguson (2011); Fukuyama (1995); Allen (2011); Neal and Williamson (2014).

⁹ One might ask which components of cooperative frameworks are more important in explaining differences in productivity and in the access to human goods between countries. One might also ask what modes of intervention should be used (and given priority) when one is trying to improve the cooperative infrastructures accessible to people in poorer countries. These are questions about the *proximal* causes of global inequalities. Additionally, one might ask about the *distal* causes. How did differences between the cooperative infrastructures available in different countries emerge? Was this due, for instance, to indigenous resources, to the asymmetries of colonial and post-colonial relations, or to long-standing differences in human capital? If there are differences in human capital, are they due to institutional factors, cultural factors, genetic factors, or some other set of factors? How are all the relevant difference-making factors related?

infrastructures than those they could access before migrating. A person's productivity (broadly conceived) is to a large extent *location dependent*, because different locations provide entry to cooperative frameworks of different qualities.¹⁰ In general, only those living in high-income countries can access the world's most efficient cooperative infrastructures. This means that removing or relaxing the barriers that hinder migration can, at least in principle, improve the quality of the cooperative infrastructures to which people from low-income countries have access, with a positive impact on the ways in which these individuals can be (economically and non-economically) active and on the (economic and non-economic) consequences of their activities.

Migrating changes the cooperative framework within which people can operate and, thereby, it changes people's ability to contribute to the social production of human goods. The rest of this article attempts to explain the implications and the significance of this fact. In Section 2, we clarify how the unequal access to cooperative infrastructures and the benefits they generate are relevant to debates about migration. We do so by conceptualizing migration as a way to diffuse innovation and, in this context, we discuss the relevance of migration to human development. In Section 3, we explore some anti-migration arguments, which we reconstruct as arguments for the view that migration can damage cooperative infrastructures in sending and host countries. We argue that, while it is important to understand the negative impacts that migration can have on the production of human goods, the magnitude of the potential benefits supports a pro-migration stance, which needs to be combined with an attempt to neutralize and counteract any disadvantages.

2 Migration, the Diffusion of Innovation, and Human Development

Cooperative infrastructures mediate the causal loop between technological and socio-political innovation on the one hand and increases in productivity on the other. Innovation in any component of a cooperative framework can result in increases in productivity broadly conceived. Increases in productivity can in turn lead to further innovation and more efficient cooperative infrastructures. The ability to influence the development of innovations and the ability to control who has access to innovations determine the societal and global impact of innovations and who can benefit from them. Given this, it is not surprising that powerful social groups vie for such influence. In modern societies, such influence is often exerted through the institutions of national state power¹¹: while it is not always possible for nation states to direct and modulate the development and diffusion of material and immaterial technologies, in many cases it is possible. Since at least the nineteenth century, nation states have taken a keen interest in doing just this.¹² They have done it with the aim of raising the productivity of their own citizens, both

¹⁰ There are additional complications that we cannot address here, such as the fact that different countries have a different place in the hierarchy of global power. It is important to keep in mind that physical location is just a proxy for a variety of clustered socio-political determinants of inequality.

¹¹ Nowadays, the power of transnational corporations and supranational organizations is increasing, but in most cases these entities still exert their influence through the institutions of nation states.

¹² There is a strong biopolitical dimension to this (Foucault 1978, 2007). It can be argued that states have been engaged in these sorts of activities since they first emerged (Scott 2017). Nation states are just a particular kind of state-like institution, and a relatively recent one. *Biopower*—understood in terms of state-like institutions that shape the labor power and thereby also the productivity of human beings (Lazzarato 2002; Negri 2008; Righi 2011; Fortunati 1995; Weeks 2011)—is very old.

relative to the citizens of competitor states and in absolute terms.¹³ The focus of such state-driven efforts has generally been on economic productivity and, more specifically, on doing better in economic terms than competitor states. Arguably, between-country inequalities are, at least to some extent, the result of this arms race. Irrespective of this, such efforts have often led to increases in productivity in absolute terms in both economic and non-economic dimensions (Rodrik 2017b; Neal and Williamson 2014).¹⁴ However, suppose your task is to promote global, as opposed to national, productivity broadly conceived. What could you do to accomplish this task?

One thing you could do is export the expertise and the technologies that are available in richer countries to poorer countries. This is what basically happened during the *Great Convergence*, the process that in the last 30 years has resulted in large increases in the economic output of countries such as China, India, and Mexico. The income levels of these countries have rapidly converged toward those of high-income countries, lifting millions of people out of poverty.¹⁵ The average productivity in these countries increased primarily as a result of information technology, which enabled the transfer of technical and institutional knowledge from highly developed countries (Baldwin 2017). The local labor force became able to access cooperative infrastructures of a much higher quality than those it could access previously.

There are limits to the exportability of this model, partly because the converging countries have features that are difficult to replicate in other contexts, and partly because their economic growth has significantly altered the global framework (Rodrik 2017a). How else can one increase global productivity? Using a variety of models, various economists have argued that open borders—allowing people to migrate to any destination—would generate a vast increase in global productivity and global wealth (Hamilton and Whalley 1984; Klein and Ventura 2007; Kennan 2013; Walmsley et al. 2011). As Clemens put it: “When it comes to policies that restrict emigration, there appear to be trillion-dollar bills on the sidewalk. [...] The gains from eliminating migration barriers dwarf—by an order of a magnitude or two—the gains from eliminating other types of barriers” (Clemens 2011; pp. 83–84). One way to put this is that large numbers of people who are now trapped in some inefficient cooperative scaffolding would, if they could, escape such scaffolding and would, as a result of accessing higher-quality cooperative infrastructures, become much more productive. Clemens makes this point in relation to the economic side of productivity, but the point applies to the production of human goods in general. In other words: *If the high-quality cooperative infrastructures will not come to the people, then let the people go to the high-quality cooperative infrastructures*. In this scenario, a socio-political innovation

¹³ Classic examples are the creation of national electricity grids, telecommunication and transportation networks, public education programs, immunization and sanitation programs, economic and political reforms, and various kinds of state-led investment programs.

¹⁴ Nation states can also attempt to gain a competitive advantage over competitor states by trying to lower the productivity of the citizens of such competitors, without necessarily raising the productivity of their own citizens in absolute terms (Morris 2014; Turchin 2007; Roland 2016). An example would be a state that funds the development of a secret military technology with the intention to use it destructively to damage the productivity of another country, e.g., to wreck its transportation and telecommunications networks. Another example would be a state that undermines and destabilizes the political institutions of another country so that the citizens of that other country end up having access to a lower-quality cooperative framework.

¹⁵ See figure 23 on p. 81, figure 26 and 27 on p. 92, and figure 32 on p. 107 in Baldwin (2017). See also figure 1.1 on p. 5 and figure 1.6 on p. 32 in Milanovic (2016).

such as the abolition or relaxation of national borders—in so far as labor mobility is concerned—would radically alter the global distribution of access to cooperative infrastructures. Many individuals would become able to do things they had hitherto been unable to do; they would become able to contribute to the production of human goods in ways hitherto unavailable to them. Their creative powers would be unleashed.

This thesis can be challenged in a variety of ways. We explore some of them in the following section. Before doing that, we would like to clarify this thesis by highlighting some implications and some methodological issues. One implication is that migration can be conceived as a means to promote the *diffusion of innovation*. Migration does not necessarily facilitate the transfer of material and immaterial technologies from one country to another, which is one of the factors that contributed to the Great Convergence and is a standard way of thinking about the global diffusion of technology (Papaioannou 2011; Buchanan et al. 2011). However, migration can make the most high-quality and innovative cooperative infrastructures more widely available because it can make them available to migrants. Just like the transfer of material and immaterial technologies from higher-income countries to lower-income countries, the movement of individuals in the opposite direction is a way of connecting people to high-quality cooperative infrastructures. Any mismatch between people and high-quality cooperative infrastructures can result in human productive potential being wasted. As a result of such restrictions, many important human goods that could be brought into existence are not.¹⁶

In principle, the free movement of people enables a better allocation of work and productive activities. The free movement of people is a special case of the free movement of the factors of production, which can lead to the spread of innovation and thus to large-scale increases in human productivity and well-being. Nevertheless, from a moral and political perspective, the movement of people has various distinctive features, which make it different from the movement of other factors of production. This is partly due to the active role that people—with their abilities, their needs, and their subjectivities—play in production.¹⁷ Moreover, being able to meaningfully and satisfactorily participate in the creation of human goods is itself a human good, and it is something that *directly* (intrinsically, non-instrumentally) contributes to well-being, independently of the other goods it generates.¹⁸ Full participation in human cooperation

¹⁶ The data on global inequalities presented by Milanovic (2016) suggest that the between-country inequalities are in various respects more significant than within-country inequalities. Even so, within-country inequalities should not be ignored. Such inequalities are generally due to within-country differences in the quality of the cooperative infrastructures that people can access. For example, there are significant differences between the more efficient cooperative infrastructures available to those who live in large (global) cities and the less efficient cooperative infrastructures available to those who live in the countryside; and, in some cases, these differences are growing (Sassen 2005). This explains the existence of policies aimed at facilitating the movement of people from the countryside to the city, although there are disagreements about the desirability (economic and otherwise) of accelerated government-led urbanization. As Caplan and Naik point out: “Open borders are familiar rural-to-urban migration writ large” (Caplan and Naik 2015, p. 190). They say this in relation to economic goods, but it holds for human goods more generally.

¹⁷ There are different aspects to this point and different ways of developing it; see Polanyi (1944), Tronti (1966), and Milanovic (2016).

¹⁸ See, for example, Buchanan (2011, chapter 7). Also see Hardt and Negri (2017, p. 205), who refer to the “constituent joy” of producing social wealth.

is greatly facilitated by being able to access high-quality cooperative infrastructures, and it is impeded when one is able to access only low-quality cooperative infrastructures.

Fundamentally, it is the pursuit of human well-being that normatively grounds the pursuit of ever-increasing productivity. The approach we are advocating is in a sense a *productivist* one, but it carefully avoids any narrow economic conception of human productive powers. We are not necessarily advocating the maximization of the production of consumer goods or services narrowly conceived; these things can certainly contribute to human well-being, but various non-economic goods are also crucial, and migration can boost the production (and reproduction) of these goods too.¹⁹

The notion of human development can be useful here. *Human development* can be understood as the process leading to large-scale increases in human well-being. Large-scale increases in human well-being occur when human goods become available to large sections of the human population. This normally happens via improvements in productivity broadly conceived. There is a link between human development (of which economic development is a special case) and productivity (of which economic productivity is a special case) (Buchanan 2008, 2011, chapter 2). It is when individuals gain access, *for whatever reason*, to more efficient cooperative infrastructures that increases in productivity occur.²⁰ Since it can be a way of distributing and widening the access to more efficient cooperative infrastructures, migration—and the policies that permit and facilitate migration flows from lower-income countries to higher-income countries—can potentially make a significant contribution to human development.²¹ This speaks in favor of a pro-migration stance.

However, adopting a global viewpoint in relation to the maximization of well-being and productivity broadly conceived might seem futile to some. There are nation states

¹⁹ One issue concerns the extent to which an approach like the one we are proposing and the expanded notion of social productivity that goes with it are compatible with the insights of the *refusal-of-work perspective* (Weeks 2011; Hardt and Negri 2009). This is an issue that we cannot properly address here. That said, we can note the following: to the extent that the plausibility and the feasibility of a radical refusal-of-work perspective depends on a post-scarcity scenario (as Weeks suggests), it is important to stress that there are global inequalities in the access to such a scenario (Pecchi and Piga 2008) and migration is a way to redistribute such access.

²⁰ The impact of migration on human development is in principle comparable to the impact of what Buchanan (2008, 2011) calls *great historical enhancements*. The notion of *enhancement* is used in debates about biomedical technologies (Savulescu et al. 2011; Clarke et al. 2016). An enhancement is an innovation that can generate a large-scale expansion of people's capabilities and can, as a result, greatly increase human productivity. Buchanan points out that enhancements in this sense are ubiquitous in human history: e.g., the introduction of literacy, numeracy, agriculture, political organization, market systems, industrial production, computers, etc. Buchanan notes that, compared to these, many biomedical enhancements are likely to have a less significant impact. This perspective is also useful for thinking about migration. Moving from a poorer country to a richer country allows migrants to access more efficient cooperative infrastructures. This allows migrants to expand their capabilities and boost their productivity. This suggests that pro-migration policies can be seen as a form, or at least as a possible source, of human enhancement.

²¹ Human development is not reducible to economic development (Sen 1999; Nussbaum 2011), and in some cases economic development can be detrimental to human development broadly conceived (see Sachs 2015, in relation to environmental degradation, for example). How should one balance different kinds of mutually incompatible human goods? These are complex issues and they become inevitably more complex when the global context—and more specifically the connections between people and cooperative infrastructures at a global level—is taken into account. However, these issues are to an extent orthogonal to those regarding the impact of migration flows (or restrictions thereof) on global productive capabilities; and to the extent that they are *not* orthogonal, one needs to consider both the positive and negative impacts that migration might have on the availability of important non-economic goods. We deal with some aspects of this problem in the following section.

that can take an interest in increasing the productivity of their citizens, but there is no global government that can take an interest in increasing the productivity of people in general. While this is true, it can be useful to think about what would be optimal for human development in general, and to see whether and to what extent the actions of individual nation states (especially the most powerful and influential ones) and those of supranational institutions can be nudged toward this hypothesized optimum. The pursuit of human development can potentially serve as common ground in policy debates at a supranational level, and the relevance of this ideal for debates about migration can be articulated by reference to the role of cooperative infrastructures in the production of human goods.²²

Others might claim that adopting a global viewpoint is misguided rather than futile. They might argue that the citizens of any country, including the richest ones, might legitimately give priority to the interests or preferences of their compatriots, and that a global viewpoint is unable to properly take this into account. They might argue that the citizens of any country, including the richest ones, have a right to reject and expel migrants and have a right to exclude migrants from their territory, from their culture, from their institutions, and more generally from their cooperative frameworks. There are various ways of developing this line of thought (Collier 2013; Miller 2016). In so far as it can be articulated in terms of protecting the productive potential of cooperative infrastructures, we address this perspective in the following section. Our approach intentionally sidesteps various controversial issues raised by compatriot-partiality perspectives as well as other kinds of approaches to migration, including a variety of human rights approaches (Fine and Ypi 2016; Oberman 2015). We do not mean to imply that such issues are not worth investigating. They are. However, we believe there is value in exploring what can be achieved within a framework that concentrates on the idea that facilitating the production of human goods (broadly conceived) is of primary and fundamental importance. This is our limited aim.²³

3 Can Migration Damage Cooperative Infrastructures?

The potential benefits of migration, which we have characterized in terms of the access to and the evolution of cooperative infrastructures, support a pro-migration stance. The

²² Just like other universalist ideals, the ideal of human development can be used as an oppressive tool by dominant hegemonic social groups, as pointed out by both Marxist and anti-Marxist critiques of such ideals (c.f. Losurdo 2011, 2015; Schmitt 2007). The misuse of universalist ideals is to be expected. These ideals have become rhetorically powerful and hegemonic groups try to deploy them to their own advantage. Such misuse is not a reason to renounce these ideals, although it may constitute a reason to denounce specific ways of using them.

²³ In relation to human rights approaches, it is worth pointing out that an appeal to human rights per se might not be particularly useful in discussions about migration, at least not in the absence of further analysis. People have an interest in free movement. They also have an interest in being able to exclude others from some of their projects (and to deny access to the resources on which such projects depend, including perhaps the territory of their country, their culture, etc.). Protecting these interests can contribute to well-being. But how do these interests compare? One way to answer this question is to assess the productivity impact of protecting (or not protecting) each of these interests, where by *productivity impact* we mean the impact on the production (and distribution) of human goods in general. While this is not the only way to answer the question, it can be a useful answer in so far as there is some agreement on the importance of the ideal of human development broadly conceived.

argument according to which migration can be a bridge to high-quality cooperative infrastructures for the citizens of poorer countries is a powerful one. However, there are a variety of potential economic and non-economic disadvantages of migration that are difficult to measure and quantify. One must have a good understanding of these negative impacts to determine if and to what extent the potential benefits of migration for human development are likely to materialize, and if and to what extent they are worth pursuing. This can be done by focusing again on cooperative infrastructures. One should ask whether migration flows can damage the productivity-enhancing cooperative frameworks accessible in host countries, and whether migration flows can damage the already inefficient cooperative frameworks accessible in sending countries.

Arguments stressing the potential negative impacts of migration can be motivated by or derived from views that, in one way or another, give priority to the interests of the members of a particular nation, race, ethnic group, or religious group. By focusing on cooperative infrastructures, it is possible to reconstruct such anti-migration ideas in a way that allows one to see whether they have any merit from a human development perspective. There is obviously no room here to carry out a comprehensive assessment, but it is important to provide some examples of how this reconstruction and this assessment can be accomplished. Let us focus on sending countries first. The cooperative infrastructures accessible to people in these countries can, in principle, be damaged by migration because, when migrants leave, they take their skills, labor power, political and social engagement, and all their other productive and creative abilities with them. The so-called *brain drain* is one aspect of this (Marchiori et al. 2012; Brock and Blake 2015). One should take into account the roles that migrants could have played in the economy and in the governance of the sending countries. One should also consider the various roles migrants played in their (extended) families, their circles of friends, and their communities before migrating—roles that they are often unable to fulfill after they have migrated. The fact that migration might worsen the entrenched legacy of colonial or neo-colonial exploitation in sending countries—with all its political, economic, and socio-cultural implications—is also an important consideration, as is the fact that migrant communities might in some cases have a negative influence on political processes in the sending countries.

All of these factors negatively affect the cooperative frameworks available in sending countries. If individuals that could have played an important role in the local production of human goods have moved away, the production of such goods suffers; and it is not just economic production that suffers, but also the production of things like well-functioning families, well-functioning communities, good governance, the destruction and transformation of colonial legacies, etc. These harms need to be balanced against the gains that migration can bring to people in sending countries. An example would be remittances (Walmsley et al. 2011). Another example would be the repatriation of skills acquired abroad by returning migrants. These skills that might be useful in a variety of contexts: the economy narrowly conceived, politics, community life, family life, etc. (Spilimbergo 2009; Mercier 2016). People in sending countries can benefit from material and immaterial innovations developed—often with the crucial contribution of migrants—in host countries. Migrant communities in host countries might in some cases have a positive impact on political processes in the sending countries, on the social capital of these countries, on the economic and social aspirations of those who stayed home, etc.

Even when there are net costs for the sending countries, the overall benefits could still be sufficiently large to offset the costs. What matters is the well-being of individuals, independently of where they are, and not the wealth of nations per se. However, a focus on well-being and productivity suggests that, in general, it would be preferable to alleviate or compensate for any damages to the cooperative frameworks of sending countries caused by migration. In principle, this can be done in a variety of ways—for example, by means of sensible policies of international aid or by means of policies that facilitate the diffusion of innovation from host countries to sending countries. Efficient solutions are not easy to identify and implement, but when the potential benefits of migration are sufficiently large, it is worth looking for such solutions.

Let us now focus on the potential damage to the cooperative infrastructures accessible in host countries. A large and sudden influx of migrants could place strain on important components of the cooperative frameworks of host countries, simply because of the number of migrants involved. A large influx of migrants might result, for instance, in a shortage of affordable housing, or it might result in transportation systems or healthcare systems being unable to function properly because of the large numbers of new users. As well as it being a matter of malfunction due to increased numbers, it could also be a matter of soaring public costs. This can happen when public funds are used to subsidize healthcare, housing, and transportation. The problem of increased costs would also apply to publicly funded disability benefits, unemployment benefits, childcare benefits, and other kinds of welfare provisions. Problems of this sort may be called *capacity problems* because they relate to the limited capacity of some components of cooperative frameworks. If migrants are entitled to access these components of the cooperative scaffolding on the same terms and at the same cost as the citizens of the host country, then capacity problems can arise (Collier 2013; Miller 2016).

However, capacity problems can in principle be avoided without necessarily having to close borders. One could try to find ways of managing the migration flows—through soft incentives rather than through coercive measures—so as to avoid that too many migrants arrive in the same place at the same time; or so that, when too many migrants arrive, any damage to the cooperative framework of the host country, if any, is minimized. Some have also suggested that policymakers could consider, possibly in combination with permissive pro-immigration policies, measures such as higher taxation rates for immigrant workers or restricting the access of newly arrived migrants to publicly funded housing, transportation, healthcare, benefits, etc. (Milanovic 2016, chapters 3 and 5; Rodrik 2017a; Pritchett 2006). Restrictions on the rights and opportunities available to migrants are not ideal because, by denying them access to some components of the cooperative framework, the cooperative scaffolding accessible to migrants becomes less efficient than the cooperative scaffolding available to the citizens of the host country. Restrictions therefore dampen the positive impact of migration on productivity. It can be conceded that capacity problems might *in some cases* become so acute as to warrant the introduction of limitations to the number of migrants and to their access to certain components of the cooperative framework available to the citizens of the host country. However, these limitations should not be introduced unnecessarily and should be lifted or relaxed as soon as circumstances permit.

It is also important to notice that, in certain circumstances, large migrant influxes might *solve*, as opposed to generate, capacity problems. For example, due to an aging population and the consequent increase in the number of older people, some high-

income countries are sometimes said to have problems with the sustainability of their pension, healthcare, and social care systems. Migrants, who are often younger than the citizens of the host country, might alleviate such capacity problems—for instance, through the kind of labor they can offer or the tax revenue they generate. Whether or not this can actually occur depends on various complex details (Kerr and Kerr 2011), but the conceptual point stands independently: one should take into account both the positive and the negative impacts that migrant flows can have on capacity. An influx of migrants does not automatically generate capacity problems. Capacity is not a fixed quantity and can in some cases increase through immigration.

Another concern relates to the impact that the arrival of a large number of migrants might have on the political institutions of the host country and on the social norms and attitudes prevalent among the citizens of such a country. Political institutions and social norms are cooperative infrastructures; they are important components of cooperative frameworks. Together with their bodies and labor power, migrants carry political views, moral views, religious views, cultural norms, attitudes, habits, sensibilities, etc. These might differ from those prevalent among the citizens of the host country. The worry then is that the ideas and tendencies of migrants might undermine the local ways of doing and thinking. More specifically, the worry is that these ideas and tendencies might undermine those aspects of the “indigenous” institutions and customs that contribute to the enhanced productivity of the citizens of the host country. This might happen in three ways:

1. The undermining might be generated by the incompatibility of institutions and customs in the host country with the ideas and tendencies brought by the migrants. In this scenario, it is the specific nature of these ideas and tendencies that matters. Someone might claim, for instance, that immigration undermines local institutions and customs because migrants have anti-social tendencies, sexist attitudes, undemocratic and authoritarian political views, or a lower IQ (Collier 2013; Jones 2015).
2. The undermining might be generated by the fact that a large influx of migrants makes the society of a host country less uniform and less cohesive than it was previously. In this scenario, it is the increase in concentrated diversity that matters: the fact that people behave differently generates trust problems and coordination problems; it generates an erosion of *social capital* (Putnam 2000, 2007; c.f. van der Meer and Tolsma 2014).
3. The undermining might be generated by the anti-immigration attitudes themselves—including, for instance, racist and xenophobic behaviors—which may be present in some of the citizens of the host country. Anti-immigration responses can damage the institutions and the fabric of a society. In reaction to migrant influxes, or to the prospect of such influxes, some citizens of the host country might decide to withdraw their support from important political institutions and from welfare provisions (Alesina et al. 2001). In this way, they might damage some of the productivity-enhancing features of the locally accessible cooperative frameworks.

These three scenarios are often difficult to distinguish empirically because the relevant processes interact in complex ways (Alesina and La Ferrara 2002; Demireva 2015), but some general observations can be made. Violence, sexism, and lack of support for crucial institutions can negatively affect the productive potential of a cooperative framework.

They can make people less able to contribute to the production of important human goods. However, the evidence for the view that migrant flows can have these sorts of consequences needs to be evaluated carefully, so as to avoid widespread biases. It is difficult to identify those aspects of a country's institutions and customs that contribute to the productive potential of the cooperative infrastructures available to the residents of that country (Harrison and Huntington 2000), and it is also difficult to determine the impact of migration flows on such institutions and customs. Given this, an awareness of the existing asymmetries in epistemic power between migrants and those who oppose immigration becomes particularly important (Collins 2017; Kitcher 2001, chapter 8). Claims that migrants bring productivity-damaging tendencies into wealthy societies have often been shown to be unwarranted (Bell and Machin 2013; Sampson 2008). In some cases, the ideas and tendencies brought by migrants—either because of their specific nature of these ideas and tendencies or because of the increased diversity they generate—might strengthen, as opposed to undermine, those immaterial cooperative infrastructures that contribute to the productivity of the cooperative frameworks of host countries.²⁴

The asymmetries in epistemic power might also explain why discussions about the harms done by migration focus primarily on the first two scenarios. However, it is important to recognize the significance of the third scenario: the *harms-from-backlash* scenario. The point is not to shift the blame from migrants to the citizens of host countries. The notion of blame is not useful within the perspective we are advocating. The point is simply to identify the real sources of the damage to cooperative infrastructures that migration can generate so that better policy responses can be formulated. Nevertheless, even if it turns out that some of the ideas and tendencies of some migrants can negatively affect the cooperative frameworks of host countries—whether directly or indirectly—foregoing the benefits of migration might, on balance, still be undesirable. It might still be preferable to adopt a pro-immigration stance in combination with policies designed to shore-up the productivity-enhancing features of local institutions and customs, or with policies designed to reduce the incidence and defuse the impact of the relevant productivity-damaging ideas and tendencies, etc.²⁵

Restrictions on the economic, political, and social rights of migrants—as happens in certain *guest worker* programs—can be used not only to solve capacity problems but also as a way of assuaging the negative reactions of local residents, or more generally for avoiding problems related to the impact of migration on the immaterial socio-political cooperative infrastructures of host countries. However, as we argued above, in most

²⁴ Despite its limitations, the Millian argument remains relevant: “It is hardly possible to overrate the value [...] of placing human beings in contact with persons dissimilar to themselves, and with modes of thought and action unlike those with which they are familiar [...] Such communication has always been [...] one of the primary sources of progress” (Mill 1848, III.17.14). As the focus is often on the potential negative impacts on economic productivity, it should be explicitly stated that migrants can introduce ideas and tendencies to host countries that contribute to the production of non-economic goods. As usual, whether this actually happens depends on a variety of circumstances.

²⁵ In general, from a perspective that focuses on productivity and well-being, it is desirable, whenever possible, to pursue such aims in non-coercive ways (e.g., without resorting to the killing, incarceration, or the expulsion of the migrants with the problematic ideas and tendencies) and without relying on harmful over-generalizations (e.g., without stigmatizing some psychologically salient group just because some members of the group have committed crimes).

circumstances such restrictions are undesirable as they make some components of the high-quality cooperative frameworks that are available in host countries inaccessible to migrants. Moreover, a two-caste society, with a full set of rights for citizens and a restricted set of rights for migrants, poses risks for the democratic cultures and identities (with all their limitations) of high-income liberal democratic countries. The tensions and conflicts generated by the existence of distinct citizenship classes—and their symbolic and expressive impact—negatively affects the productive potential of cooperative frameworks.

When considering the damage to cooperative infrastructures suffered as a result of a backlash against immigration, domestic distributive issues also need to be addressed. There exists a complex debate about whether immigration has a negative impact on the income levels of the citizens of host countries. Some evidence suggests that there might be a small and short-lived negative impact on the wages of the poorer and less qualified local workers, but in general the impact of immigration on wages seems to be positive—although it is difficult to predict what would happen if migration flows were to increase (Card 1990; Dustmann et al. 2013; Kennan 2013, 2017; Clemens and Hunt 2017; Docquier et al. 2014; c.f. Borjas 2016, 2017a, 2017b). Nevertheless, the impact of migration on the poorest segments of the population of host countries constitutes an important and difficult problem, and it is not just a wage problem. The (paternalistic) suggestion that the harms-from-backlash issue can be solved by explaining the benefits of migration to the citizens of host countries (especially to those with lower levels of educational attainment) is unsatisfactory.

The poorest citizens of high-income countries are often among the wealthiest people on the planet. As Milanovic puts it: “The richest Malians are poorer than the poorest Danes” (Milanovic 2012, p. 128; see figure 2 on that page). This is significant, but it is only part of the picture. The relative deprivation of the poorest segments of the local population of host countries matters; this is true also from a productivist perspective like ours. Various patterns of oppression interact with and reinforce each other in such a way as to cause inequalities and disadvantages that are particularly entrenched and problematic (Collins 1990; Collins and Bilge 2016); this applies globally, but it also applies within high-income countries. To the extent that migration contributes to keeping the poorest citizens of a host country impoverished, demoralized, angry, vulnerable to xenophobic propaganda, and unable to access the best cooperative infrastructures available in that country, the productive potential of the cooperative frameworks in such countries is negatively affected. For example, the poorest citizens of host countries can be harmed by migration flows if (and to the extent that) redistributive taxation and welfare provisions benefit such citizens, if (and to the extent that) these provisions depend on feelings of trust and solidarity, and if (and to the extent that) these feelings are eroded by migration flows (Miller 2016; Collier 2013). One way to deal with issues of this sort would be to adopt policies that compensate the affected “indigenous” population via welfare provisions and other kinds of interventions. Again, identifying and implementing solutions to these problems is not easy, but if the potential benefits of migration are large, foregoing such benefits is less desirable than trying to find feasible alternatives to deal with the impact of migration on the socially and economically deprived citizens of host countries.

Migrant influxes can have a negative impact not just on the economic goods accessible to the poorest citizens of wealthy countries but also on some of the non-economic goods accessible to such individuals. For example, migrant flows might weaken the community bonds and the sense of community pride that exists among the local residents, especially among the poorest, i.e., those who do not belong to the cosmopolitan well-traveled and well-educated segments of the population. In high-income countries, and increasingly all over the world, many aspects of community life have been swept away by industrialization and globalization. Marx and Engels famously pointed out that, as a result of industrial capitalism, “all that is solid melts into air, all that is holy is profaned” (Marx and Engels 1848/1977, p. 487). The melting—with all its positive and negative aspects—is happening, but it is taking time. Some community bonds are still in place, even in wealthy industrialized and post-industrialized countries, and they are the sources of important human goods, at least for some people in these countries (Haidt 2012). Even so, it is not clear that such bonds are necessarily threatened by the arrival of migrants: it might be possible to transform or reinvent these bonds—including those connected to national and cultural identity—so as to make them more inclusive and better-suited to deal with the arrival and the integration of migrants (Appiah 2006). Moreover, even if the melting of the bonds is in some way accelerated by migration flows, a proper redistribution of the benefits of migration could be used to compensate those who lose out. The erosion of community bonds and the contribution of migration flows to this phenomenon can be assessed in terms of their impact on the productive potential of cooperative infrastructures. National, religious, ethnic, and other kinds of (local, partial, and exclusivist) identity bonds have had both positive and negative impacts on human cooperation and human development in the past. Given the way cooperative infrastructures are evolving, the role they might play in the future remains uncertain.

Migration is a powerful way of matching people to high-quality cooperative infrastructures. Migration might destroy the access to some goods, either specifically for some people (in host countries or in sending countries) or for human beings in general, but the surplus of economic and non-economic goods resulting from migrant influxes can be redistributed, at least to an extent, so as to counteract and compensate for such destruction. The more such surplus is spread—and not just within host countries, but globally—the larger the contribution of migration to human development.²⁶ Human development is neither *monodimensional* nor *monotonic*. All large-scale positive contributions to human development—all the material and immaterial technologies that have generated large-scale increases in human well-being—have resulted in new challenges and in the loss of some human goods.²⁷ The losses should never be underestimated and the problems must be addressed, but they are only part of the

²⁶ Some of the goods produced by the relaxation of constraints on labor mobility would be (or could be made into) global public goods. New technical and institutional knowledge, in part generated by migrants, can nowadays spread worldwide thanks to information technologies and global supply chains (Baldwin 2017).

²⁷ The spread of agriculture and animal domestication made some of the human goods that were available to hunter-gatherers unavailable to the vast majority of human beings, just like industrialization and urbanization did in relation to some of the human goods that were available to agriculturalists and pastoralists (Sahlins 1972; Scott 1998, 2017).

picture. For this reason, it is not enough for anti-migration advocates to show that migration can lead to problems and losses of some important human goods, either in host countries or in sending countries. Anti-migration advocates need to also show that the losses outweigh and cannot be offset by the benefits that migration produces (e.g., the human goods it generates), and that there is no suitable way to properly neutralize or alleviate the suffering of those who find themselves negatively affected.

4 Conclusions

Many barriers to migration have either fallen or are now easier to climb than in the past.²⁸ However, many obstacles still remain and some of the most important obstacles persist due to the restrictive and exclusivist policies of the countries that are the target of migration, and due to the hostile environment that such policies and the reactions against migrants create in these countries. It is mainly because of these factors that migrating is still difficult, expensive, and, for many, dangerous.²⁹ Restrictive citizenship regimes—and more generally anti-migration policies and attitudes—are *tools for distributing (and denying) the access to cooperative infrastructures*.³⁰ The distribution of access to cooperative infrastructures is a crucial issue for anyone interested in the ways technology broadly conceived can change human lives and in the normative implications of such changes. The political barriers to migration result in individuals in lower-income countries being unable to access high-quality cooperative frameworks comprising complex and interconnected material and immaterial technologies. Access to these technologies would, at least in principle, make these individuals able to contribute to the production of human goods in ways that are currently not available to them. Restrictions on migration contribute to stifling the creative potential of hundreds of millions of people. In principle, migration—understood as a way to spread access to the best material and immaterial technologies—could unleash this potential and, by doing so, could result in increasingly complex productive forces.

²⁸ For the individual migrant, migration is financially and psychologically costly, as well as costly in a variety of other ways too. In the hope that they and their family get access to more and higher-quality human goods, migrants make significant sacrifices and give up important human goods. This takes a toll on their well-being (Collier 2013). In the last few decades, as a result of progress in transportation and telecommunications (Fortunati et al. 2013), some of the costs of migrating incurred by migrants themselves have decreased. Nowadays, travel can be fast, cheap, and safe. Mobile phones, email, and social media provide migrants with ways to keep in touch with any family or friends they leave behind, and with their communities. This also allows them, to a certain extent, to continue playing a role in their country of origin. Moreover, through books, websites, television programs, movies, social media, or actual migrants with whom they are in contact, would-be migrants can get reliable information about the countries they want to reach. This, at least in principle, can help them select a suitable country, and it can help them with the process of social and economic integration. The fact that would-be migrants can often join real and virtual communities of actual migrants coming from the same sending country can also work as a facilitating factor. The lower the costs of migrating for the migrants themselves, the easier it is for them to contribute to the production of human goods, for themselves and for others.

²⁹ Estimates indicate that hundreds of millions of people would be willing to migrate, at least temporarily, if such factors were not in place (Esipova et al. 2017; Laczko et al. 2017).

³⁰ Shachar argues that birthright citizenship functions as an archaic property regime—where the property in question is conceived as collective national property—and as “a distributor, or denier, of security and opportunity on a global scale” (Shachar 2009, p. 5). This can be understood in terms of coercive mechanisms that modulate people’s access to cooperative infrastructures.

Barring access to the most efficient cooperative infrastructures available on the planet based on citizenship can be seen as “the modern equivalent of feudal class privilege” (Carens 2013, p. 226).³¹ Such restrictions generate a privilege that individuals in wealthy countries receive as a result of their circumstances of birth.³² In some cases, inequalities can positively contribute to human development; in some situations, this might also apply to privileges due to circumstances of birth. But, in the current context, the inequalities kept in place by restrictions on migration seem to work as an undesirable brake on human development.

The downsides of migration need to be considered. These downsides can be conceptualized as the potential damage that migration flows, and the reactions against such flows, can inflict on the cooperative frameworks available to people in both sending countries and host countries. Migration can, in some cases, inhibit the creation of important human goods. Identifying these potential harms and their magnitude is important. Once identified, the harms need to be weighed against the potential benefits that migration can generate. One promising strategy consists in trying to find ways to neutralize, alleviate, and compensate for these harms and in trying to modulate the speed and the magnitude of migration flows—so as to reduce the risk of damage to cooperative infrastructures. If this strategy works, migration will contribute to human development via its role in the dissemination of the fruits of social and technological progress to increasingly broader segments of humankind.

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³¹ See Losurdo's discussion on *master-race socialism* and more generally on the attempts of privileged groups (e.g., the citizens of a high-income country) to make some productive resources that are available to them—as well as the benefits generated by such productive resources—inaccessible to those who do not belong to the privileged group (e.g., those who are not citizens of the country in question) (Losurdo 2011, chapter 5).

³² Buchanan et al. (2000, chapter 7) link discussions about enhancement (and disability) to discussions about the advantages (or disadvantages) that people can have with respect to productivity broadly conceived, including those relating to the intrinsic value of participation (c.f. Buchanan 2011; chapter 7). As barriers to migration affect productivity, what these authors say is also relevant in relation to migration. Even when people in the USA and people in Yemen have the same employment-relevant intrinsic features, they differ in that the people in the USA are “enhanced” relative to the people in Yemen. This is due to differences in the cooperative infrastructures, and thereby to differences in the ways people in the two countries can participate in the collective production of social wealth. People in Yemen are disadvantaged because they do not have access to those factors that enable people in the USA to be more productive (in the broadest sense). When people are allowed to move from Yemen to the USA, most of the disadvantage vanishes (Clemens et al. 2009).

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